US Army Corps
of Engineers®
Seattle District

Notice of Preparation

Planning and Project Management Division
Environmental Management Branch
P.O. Box 3755
Seattle, WA 98124-3755
ATTN: Jeffrey F. Dillon (PM-PL-ER)

Public Notice Date: 1 June 2009
Expiration Date: 20 June 2009
Reference: PL-09-07

Name: Leach Rd., Old Soldiers Home, Jones Road Levee and Water Ski Levee Repairs

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Interested parties are hereby notified that the U.S. Army Corps of Engineers, Seattle District (Corps) plans to prepare, pursuant to the National Environmental Policy Act (NEPA), an environmental assessment (EA) for proposed levee repairs on the Puyallup River at the Leach Road Levee (RM 19.8); Jones Road Levee (RM 21.3) and Old Soldiers Home Levee (RM 22.6) and at the Water Ski levee (RM 15.8) on the Carbon River, Pierce County, Washington. Repairs are intended to address damage caused during flooding. Major flooding occurred on the Puyallup and Carbon Rivers in January 2009 with a 33-year flood event occurring at the Orting gage. Intense rainfall and rapid snowmelt were a result of a high velocity jet stream which is a common weather pattern experienced in this region. Because of the levee damages on the Puyallup and Carbon Rivers are in such close proximity, this document includes both river systems.

AUTHORITY

The proposed levee repair is authorized by Public Law 84-99 (33 U.S. Code Section 701n). Corps rehabilitation and restoration work under this authority is limited to flood control works damaged or destroyed by floods. The statute authorizes rehabilitation to the condition and level of protection exhibited by the flood control work prior to the damaging event. Pierce County is the local sponsor for these projects.

PROPOSED ACTION

The purpose of the project is to repair and return the damaged levees to the level of flood protection found prior to the January 2009 flood event in order to protect lives and property from subsequent flooding. Multiple alternatives are under consideration, including the non-structural, Setback, Repair-in-kind and No Action alternative.

Replace In Kind. This alternative is currently the preferred alternative for all four projects.

Leach Road: Flood waters overtopped the Leach Road levee near Orting along a 550 linear foot (LF) section, resulting in erosion of the upper 3 feet of the levee embankment material and riverward slope protection loss. The project is located on the left bank of the Puyallup River in Section 30, Township 19 North, Range 5 East, and Section 25, Township 19 North, Range 4 East of the Willamette Meridian at rivermile 19.8. In the current condition, the levee offers 2-year level of flood protection. With repair, the levee would have a 25-year level of protection. Repairs would consist of repairing the 550 LF washed out section. New embankment material would be placed to re-establish the levee prism to the pre-flood grade with addition of 3 feet to match the elevation of undamaged sections up and downstream. The levee face

would be regraded to achieve a 2H:1V slope, installing a 1 foot filter blanket (spalls) overlaid by 3 feet of riprap on the levee face. The riprap would be tied into the existing toe rock. All work would be above water at time of construction. All disturbed areas would be hydro seeded with native grasses. Soil would be laid over the embankment armor and planted with willows to encourage vegetative growth. Access would be via the top of the levee which remains a drivable surface.

Jones Road: Floodwaters resulted in toe scour and loss of embankment along the Jones Road Levee near Orting. The project is located on the right bank of the Puyallup River in Sections 31 and 32, Township 19 North, Range 5 East, and Section 5, Township 18 North, Range 5 East of the Willamette Meridian at rivermile 21.3. The Jones Road levee is across the river from the Old Soldiers Home Site 2 location. Repairs are required at the downstream end of the levee system, immediately upstream of Calistoga Bridge on a levee section with heavy rock placement. Approximately 500 LF of slope and toe damage would be repaired. In the current condition, the levee offers 2-year level of flood protection. With repair, the levee would have a 30-year level of protection. Repair would consist of regrading the levee face and adding granular fill to achieve a 2H:1V slope. Large armor rock would be used to reconstruct the scoured toe areas, and riprap placed on the levee face as erosion armor (3 feet thick, min.). A six inch lift of crushed gravel would be applied to the levee top (driving surface). Soil would be laid over the embankment armor and planted with willows to encourage vegetative growth. All disturbed areas would be hydroseeded with native grasses.

Old Soldiers Home: Flood waters resulted in toe scour and loss of embankment along the Old Soldiers Home Levee in two locations near Orting. The project is located on the left bank of the Puyallup River in Sections 31 and 32, Township 19 North, Range 5 East, and Section 5, Township 18 North, Range 5 East of the Willamette Meridian at rivermile 22.6. Site 1 is located generally in the middle of the levee system and consists of 290 LF of slope and toe damage. Site 2 is at the downstream end of the levee system, immediately upstream of Calistoga Bridge on a levee section with heavy rock placement and consists of 150 LF of slope and toe damage. In the current condition, the levee offers 5-year level of flood protection. With repairs, the levee would have a 40-year level of protection. Site 1 (middle reach) consists of 290 LF of toe and slope rock replacement. Work at Site 1 would consist of excavating and re-sloping the levee face to establish a 2H:1V slope, armor rock would be placed to re-build the levee toe, and placement of a 1 foot filter blanket (spalls) overlain by 3 feet of riprap. Soil would be placed on the levee toe to establish an 8 foot wide bench where willows would be planted. Site 2 repairs (downstream reach) would include re-establishment of the toe and installation of a 1 foot filter blanket overlain by 3 feet of riprap. Spalls would be mixed with the riprap to fill the interstices, which would be overlain by soil suitable for willow plantings. At both locations, a 6 inch lift of gravel would be placed on the driving surface, and excess excavation material would be placed on the backslope. All damaged areas would be hydroseeded with native grasses. Access is provided by existing roads and levee top that would not require substantial alteration to support the work.

Water Ski Levee- Carbon River: Flood waters on the Carbon River exceeded flood stage and high velocity flows caused toe scour, loss of embankment, and loss of armor rock for 390 LF. The Water Ski Levee Rehabilitation is located on the right bank of the Carbon River in Sections 26 and 27, Township 19 North, Range 5 East of the Willamette Meridian at rivermile 15.8. In the current condition, the levee offers 6-year level of protection. With repair, the levee would provide 50-year level of protection. The total repair length is 390 LF. The existing damaged riverward slope will be regraded to a 2H:1V. Existing armor rock will be temporally stockpiled to be reused on site. A 5'x10' toe would be constructed with 2 to 4 ton stone to re-establish the damaged toe. A 3 foot blanket of 3-4 man rock would be installed over a 1 foot filter blanket of spalls from the toe to the crown. Along the upper 6 feet of the levee slope, spalls would be placed over the armor rock to fill the interstices, and a 1 foot lift of topsoil would overlay the spalls and rock. The slope would then be planted with willows. All damaged areas would be hydroseeded

with native grasses. Access is provided by existing roads and levee top that would not require substantial alteration to support the work.

Final selection of the preferred alternative and finalization of the design, including any additional environmental measures, would occur during the NEPA process and before construction.

ANTICIPATED IMPACTS

The project is expected to cause temporary disruptions to nearby fish and wildlife as a result of noise and vibration. Repairs would be done in the approved in-water work windows (July 15-August 31 in the Puyallup; July 15 - September 15 in the Carbon), to minimize impacts to salmon, bull trout and steelhead. Riparian vegetation loss would be minimal and new vegetation would be planted at all sites.

A biological assessment is being prepared pursuant to Sec. 7 of the Endangered Species Act. No effect is expected to grizzly bear, gray wolf, Canada lynx, marbled murrelet, killer whale, spotted owl golden paintbrush and water howellia because of specialized habitat requirements that are not present in the project site, intolerance to the existing level of human activity, or both. Affects to other listed animal and plant species including, Puget Sound/Coastal bull trout, Puget Sound Chinook salmon, will be determined during the Federal ESA consultation process. Impacts to bald and golden eagles will be considered pursuant to the Bald and Golden Eagle Protection Act.

Potential effects to water quality include a small incremental effect of loss of shading. It is possible that suspended solids may enter into waters and temporarily causes increases in turbidity. Long term benefits are anticipated through provision of riparian vegetation along the repaired levee. Wetlands have not been identified on any of the proposed sites. Work will not result in exceedences of the pre-damage levee footprints or changes in the nature of the levees. Construction vehicles and heavy equipment will temporarily and locally generate gasoline and diesel exhaust fumes, carbon dioxide (CO2), carbon monoxide, and dust on roadways. Temporary increases in noise would occur as a result of rock delivery and placement. All the proposed projects are in or near the town of Orting. Construction-related traffic would cause minor temporary increases to, and disruption of, local traffic.

Prior to repairs, a Corps archeologist will conduct a cultural resources survey of the project area to determine whether there is a potential for the proposed repairs to cause effects to historic properties. The Corps' determinations of effects to historic properties, the investigation report, and monitoring plan will be reviewed and approved by the Washington State Historic Preservation Officer (SHPO) and the appropriate tribes prior to construction.

The repairs would return the levees to their pre-flood level of protection. Development within the Puyallup valley would continue. Development could possibly be fostered by the presence of these levees, which would mean further long-term environmental degradation.

COMPLIANCE WITH OTHER LAWS AND REGULATIONS

The Corps will coordinate the proposed action with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service concerning anticipated effects on threatened and endangered species and their critical habitat, pursuant to Sec. 7(a)(2) of the Endangered Species Act. A biological assessment is being prepared to provide determinations on affects to threatened and endangered species and their designated critical habitat. An evaluation will be made concerning whether the projects are anticipated to adversely affect Essential Fish Habitat under the Magnuson-Stevens Fishery Conservation and Management Act. Section 404(f)(1)(B) of the Clean Water Act exempts levee rehabilitations from requiring a Section 404 evaluation and accompanying Section 401 Water Quality Certification so long as the repairs do not result in changes to the character, scope, or size of the original fill design in a manner that affects the waters of the U.S., and will occur within a reasonable period of time after damage occurred. The 2009 Puyallup

and Carbon River projects each meet these exemption guidelines. There are no wetlands present in footprints of these proposed projects and no wetland fill is anticipated. Pierce County is considered coastal under the Coastal Zone Management Act (CZMA). A determination of consistency with state and county shoreline management plans pursuant to the CZMA would be made. The project is not anticipated to cause violations of any standards under the Clean Air Act.

EVALUATION

The Corps has made a preliminary determination that the environmental impacts of the proposal can be adequately evaluated under the National Environmental Policy Act through preparation of an environmental assessment (EA). Preparation of an EA addressing potential environmental impacts associated with the levee rehabilitation project is currently underway.

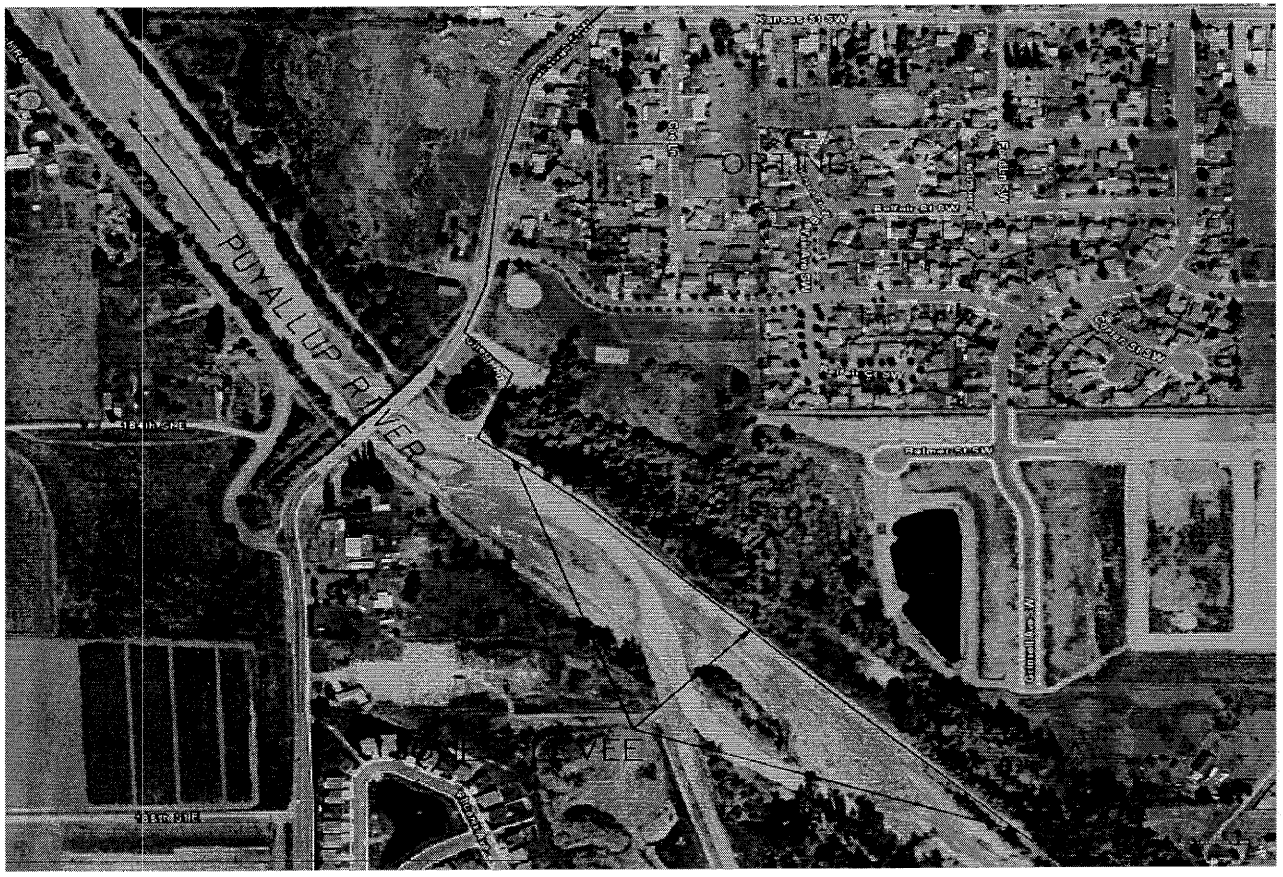
The Corps invites submission of factual comment on the environmental impact of the proposal. The Corps will consider all submissions received before the expiration date of this notice. The nature or scope of the proposal may be changed upon consideration of the comments received. The Corps will initiate an Environmental Impact Statement (EIS), and afford all the appropriate public participation opportunities attendant to an EIS, if significant effects on the quality of the human environment are identified and cannot be mitigated.

Comments should reach this office (address at top), not later than 30 days from the date of this notice in order to ensure adequate consideration. Project information and drawings are attached to this document. Requests for additional information should be directed to Lester Soule, Project Manager, at 206-764-3699 and email address: lester.e.soule@usace.army.mil or the Environmental Coordinator Mr. Jeffrey F. Dillon at telephone 206 764-6174; email address: jeffrey.f.dillon@usace.army.mil.

PROJECT DRAWINGS AND PHOTOGRAPHS.

JONES ROAD

1.1.1 Appendix B: Project location and design data, maps, and related information



(Google Earth 2007: Annotated by Corps, 2009)

The levee is located on the right bank of the Puyallup River in Pierce County, WA

ENGINEERING DESIGN SHEET OFFICE SYMBOL: EC-DB-CS

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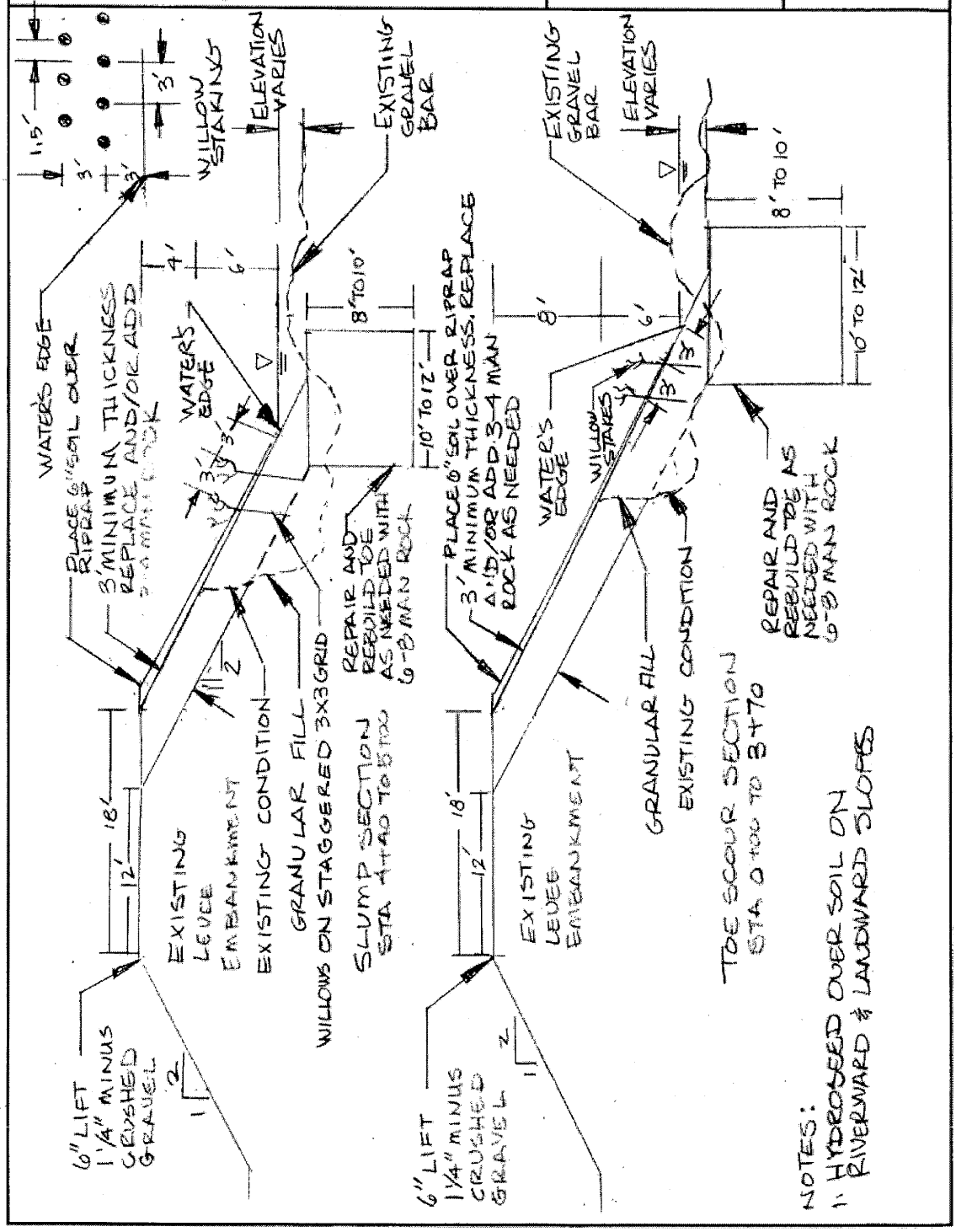
SUBJECT JONES LEVEE	CHECKED BY	SHEET: OF: PART:



1.1.2 Appendix D: Damages

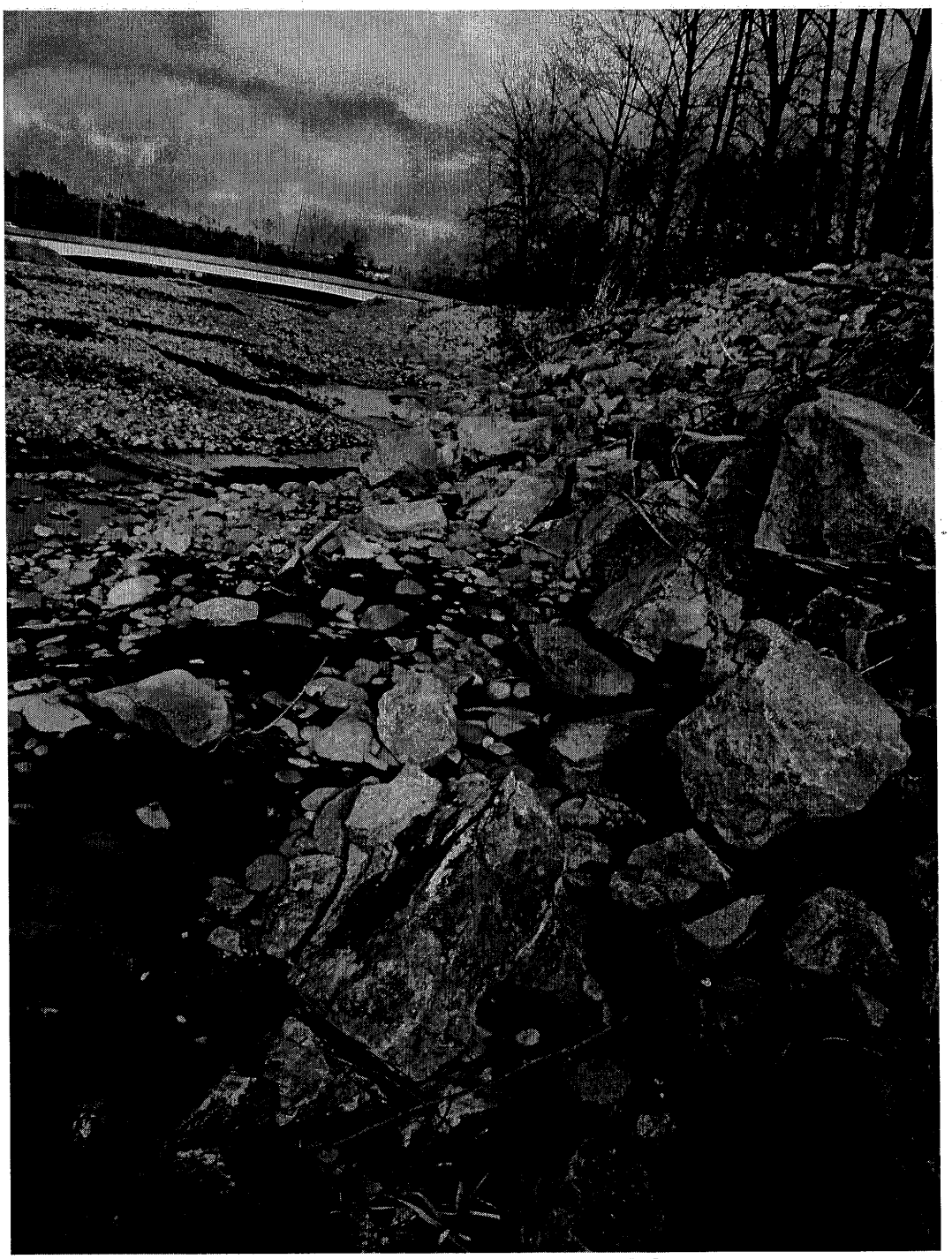


Photo 1 – Photo looking downstream along damaged toe and slope

(Corps 2009)

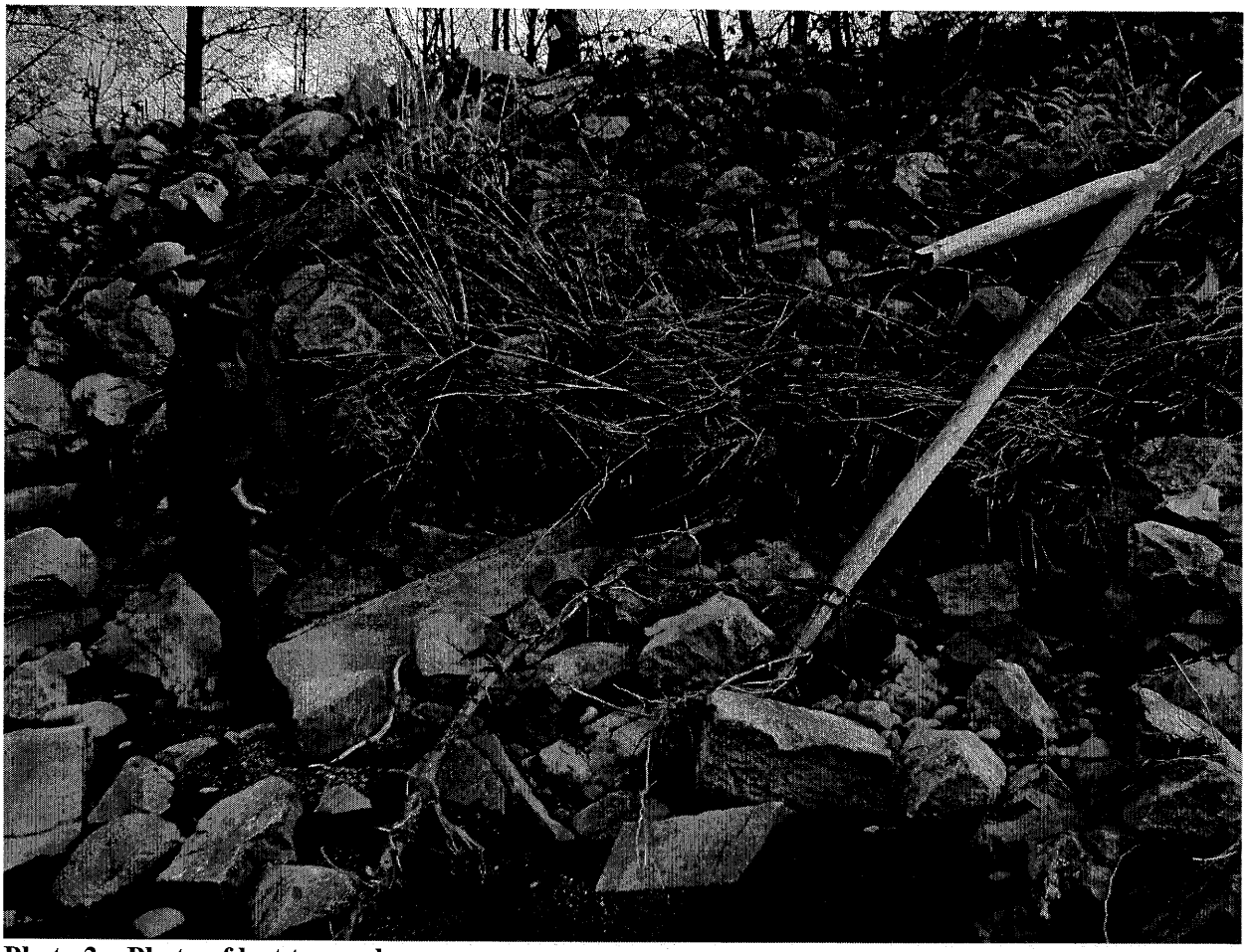
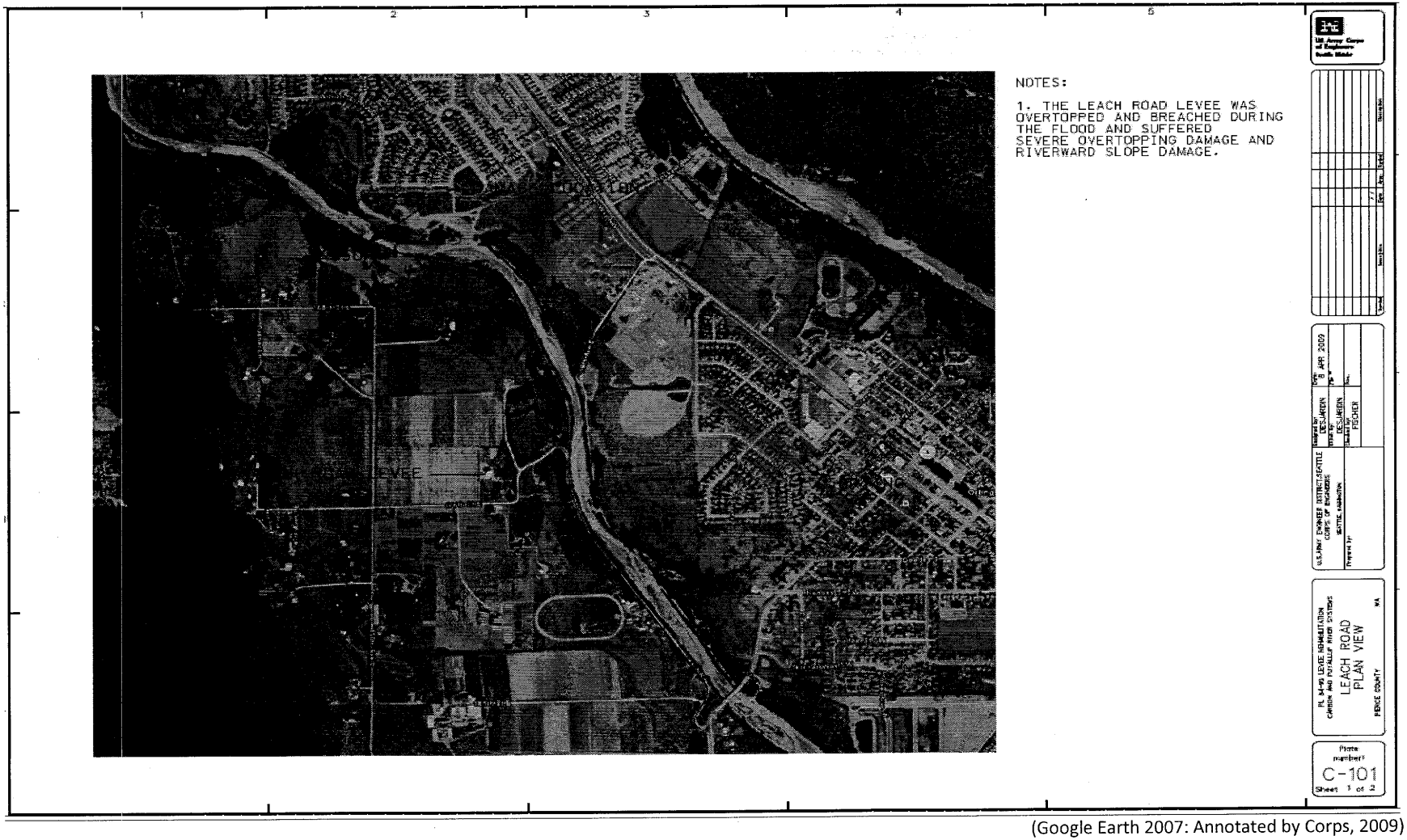


Photo 2 – Photo of lost toe rock

(Corps 2009)

LEACH ROAD

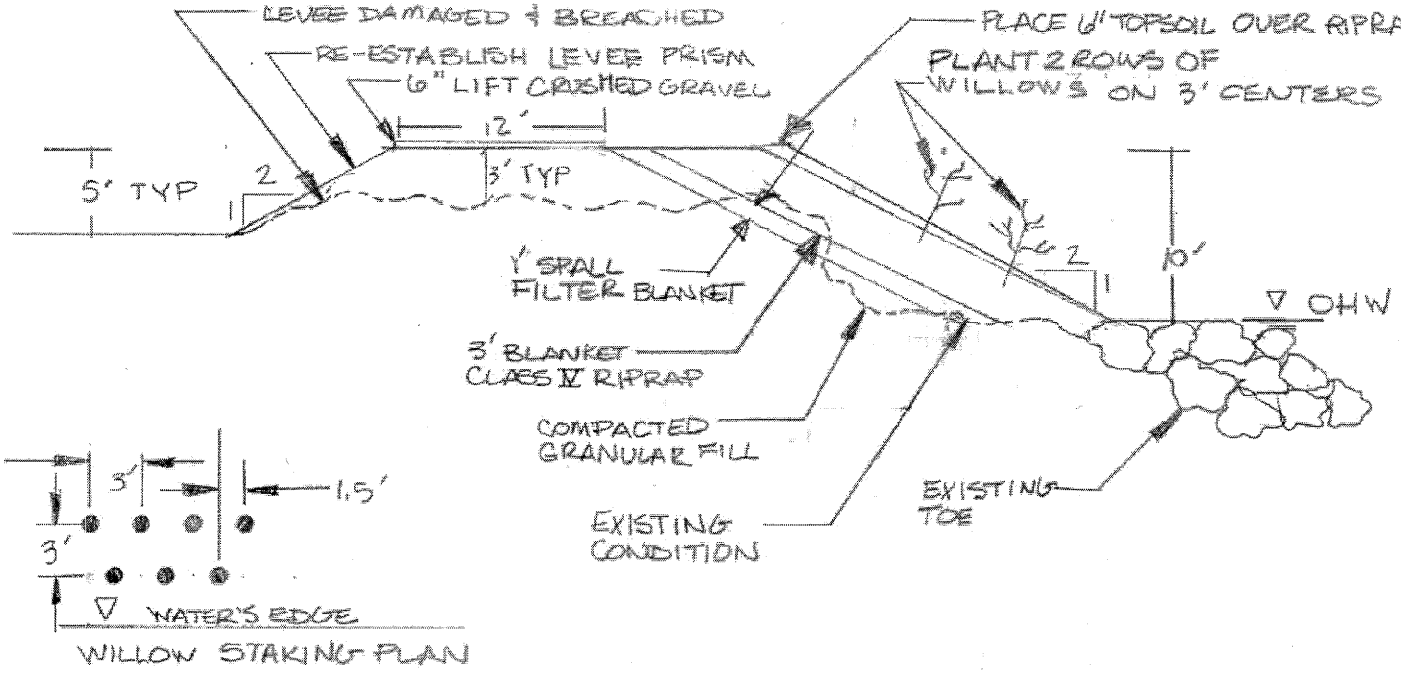
Appendix B: Project location and design data, maps, and related information



(Google Earth 2007: Annotated by Corps, 2009)

The Leach Road Levee is on the left bank of the Puyallup River in Pierce County, WA

(Section 30, Township 19 North, Range 5 East, and Section 25, Township 19 North, Range 4 East, Willamette Meridian



WILLOW STAKING PLAN

NOTES:

1. REPAIR BREACH 550 LF. APPROX. TOP 3' OF LEVEE WAS LOST ALONG 550'
2. RE-ESTABLISH RIVERWARD(550 LF) & LANDWARD (400 LF) SLOPES. PLACE SPALL FILTER BLANKET AND RIPRAP ARMOR.
3. COVER RIPRAP WITH FILTER BLANKET & SOIL ABOVE OHW. PLANT 2 ROWS OF WILLOWS PER STAKING PLAN.
4. RE-ESTABLISH LEVEE CROWN & COVER W/6" LIFT OF 1/4" MINUS CRUSHED GRAVEL
5. HYDROSEED ALL DISTURBED AREAS.

PROJECT 2009 PIERCE COUNTY LEVEE REPAIRS

SUBJECT LEACH ROAD LEVEE

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DATE: 08 APR 09

SHEET: 2 OF 2

PART:

1.1.3 Appendix D: Damages

(Corps 2009)

Photo 1: Breach (Repair site)

OLD SOLDIERS HOME LEVEE

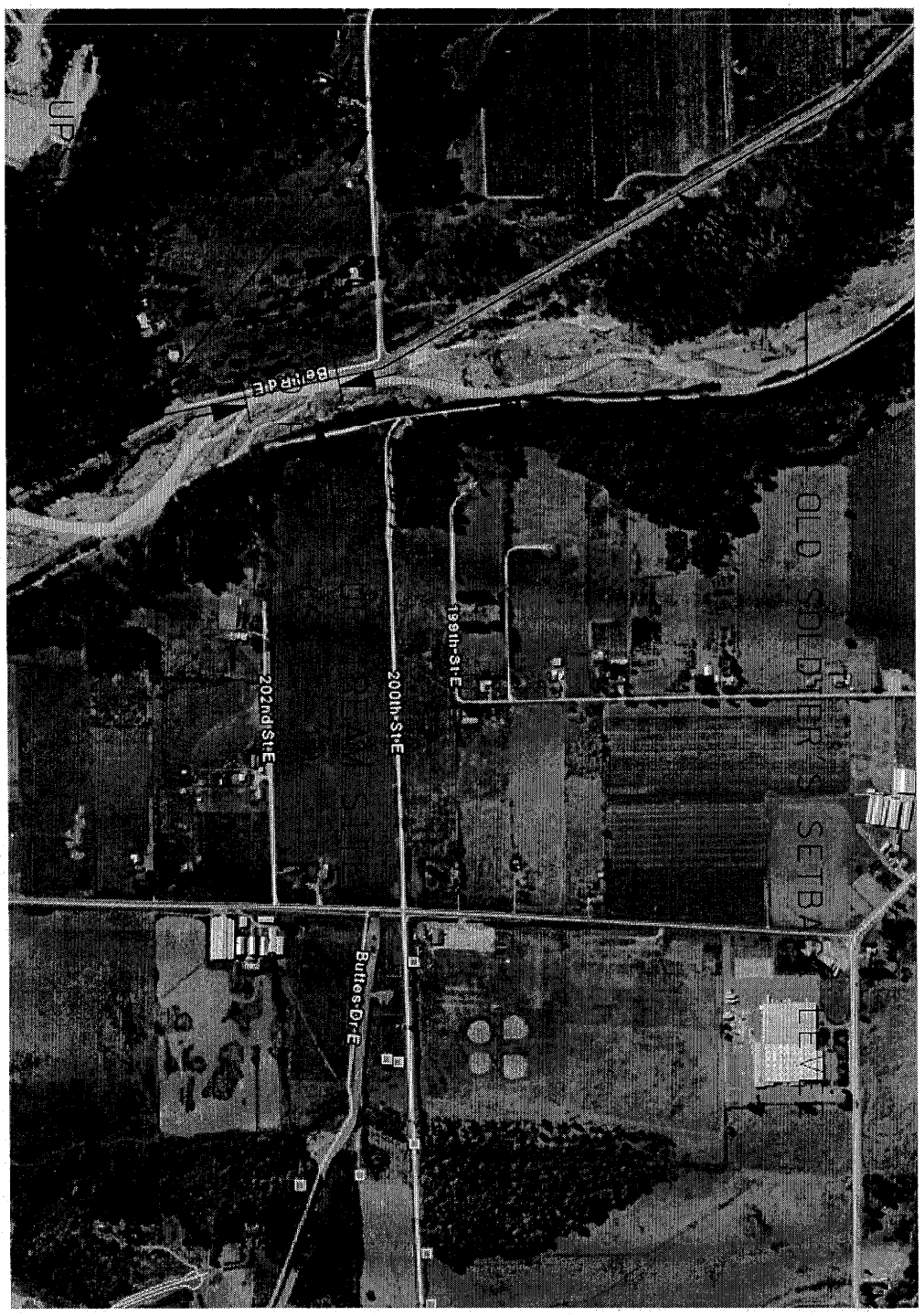
Appendix B: Project location and design data, maps, and related information

(Google Earth 2007: Annotated by Corps, 2009)

Figure 1 - Old Solders Home Map

The levee is located on the left bank of the Puyallup River near Orting in Pierce County, Washington.

(Sections 31 and 32, Township 19 North, Range 5 East, and Section 5, Township 18 North, Range 5 East of the Willamette Meridian)



PLAN NORTH

PL 84-99 LEVEE REHABILITATION
PUYALLUP AND CARBON RIVERS
SOLDIER'S HOME LEVEE
PIERCE COUNTY WA

Plate number: C-101
Sheet 1 of 4

U.S.ARMY ENGINEER DISTRICT,SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

Designed by: DESJARDIN
Drawn by: DESJARDIN
Checked by: FISCHER
Prepared by:
Date: 8 APR 09
File #:
Rev.

Symbol	Description	Date	Appr.	Symbol	Description

U.S. Army Corps of Engineers
Seattle District

U.S. Army Corps of Engineers
Seattle District

Designed by: DES JARDIN	Date: 6 APR 09
Drawn by: DES JARDIN	Plot:
Checked by: FISCHER	No.

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

Prepared for:

PL 84-99 LEVEE REHABILITATION
PUYALLUP AND CARBON RIVERS

SOLDIER'S HOME LEVEE

PIERCE COUNTY WA

Plate number:
C-101
Sheet 2 of 4

ENGINEERING DESIGN SHEET OFFICE SYMBOL: EC-DB-CS

PROJECT: 2007 PIERCE COUNTY LEVEE REPAIRS

SUBJECT: SITE 1 UPSTREAM SOLDIERS HOME

COMPUTED BY: DESJARDIN

CHECKED BY:

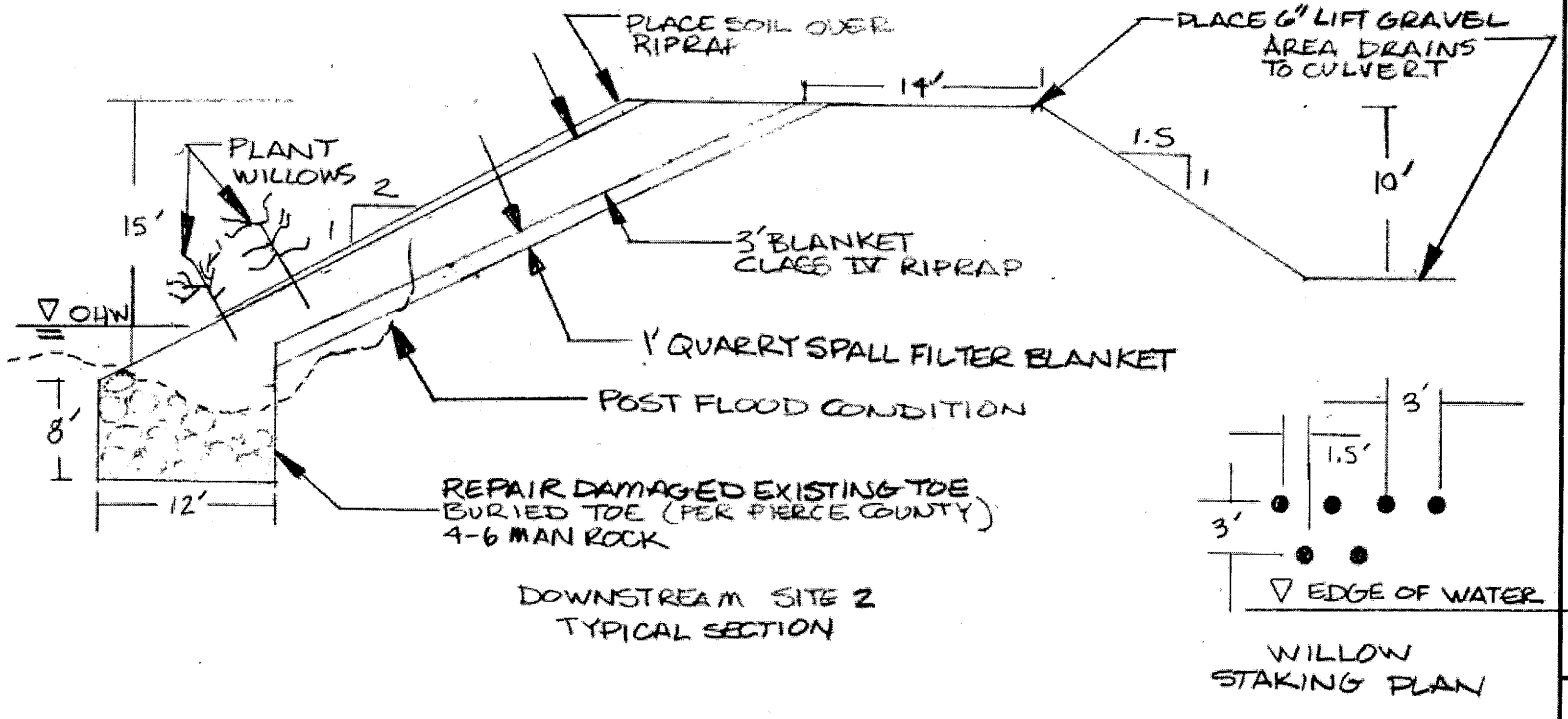
DATE: 08 APR 08

SHEET: 3 OF: 4

PART:

NOTES:

1. EXCAVATE MATERIAL FROM LEVEE FACE REUSE EMBANKMENT MATERIAL ON BACKSLOPE AND RIPRAP ON RIVERWARD FACE. MINIMUM LEVEE TOP WIDTH = 15 FT
2. EXCAVATE LEVEE AND SET LEVEE BACK TO CREATE BENCH. PLACE 1' LIFT FILTER PRIOR TO PLACING 3' BLANKET CLASS IV RIPRAP.
3. PLACE SOIL ON LEVEE TOE TO CREATE PLANTING BENCH 8' WIDE
4. LENGTH OF REPAIR = 290 FT.
5. ERS REQUESTED SOIL TO BE PLACE ON EXPOSED ROOTS APPROX. 800' UPSTREAM
6. PLACE 6" LIFT GRAVEL ON DRIVING SURFACE
7. HYDROSEED ALL DISTURBED AREAS.



DOWNSTREAM SITE 2
TYPICAL SECTION

WILLOW
STAKING PLAN

NOTES:

1. LENGTH = 150 FT.
2. RE-ESTABLISH LOWER SLOPE AND TOE PROTECTION.
3. COVER RIPRAP WITH SOIL ABOVE OHW AND PLANT WILLOWS PER STAKING PLAN. REMOVE SCOTCHBROOM.
4. PLACE 6" LIFT OF 1¼" MINUS CRUSHED ON LEVEE CROWN. VOLUME 6" X 150' X 14'
5. HYDROSEED ALL DISTURBED AREAS

ENGINEERING DESIGN SHEET OFFICE SYMBOL: EC/DB/CS

PROJECT: 2009 PIERCE COUNTY LEVEE REPAIRS

SUBJECT: DOWNSTREAM SITE 2 SOLDIER'S HOME

COMPUTED BY: DB/JAEDIN

CHECKED BY:

DATE: 08 APR 09

SHEET: 4 OF: 4

PART:

Appendix D: Damages

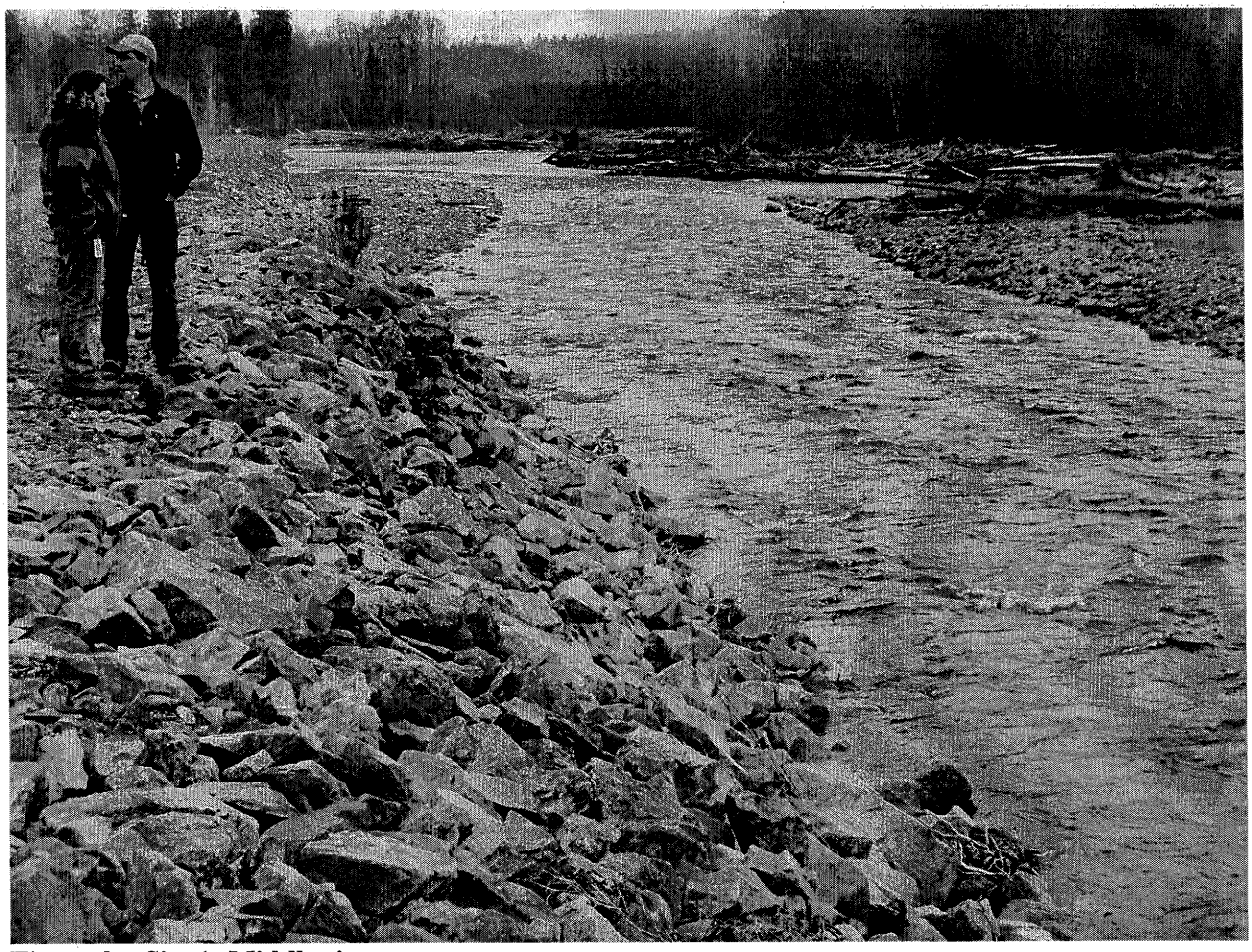


Figure 2 – Site 1 -Middle site

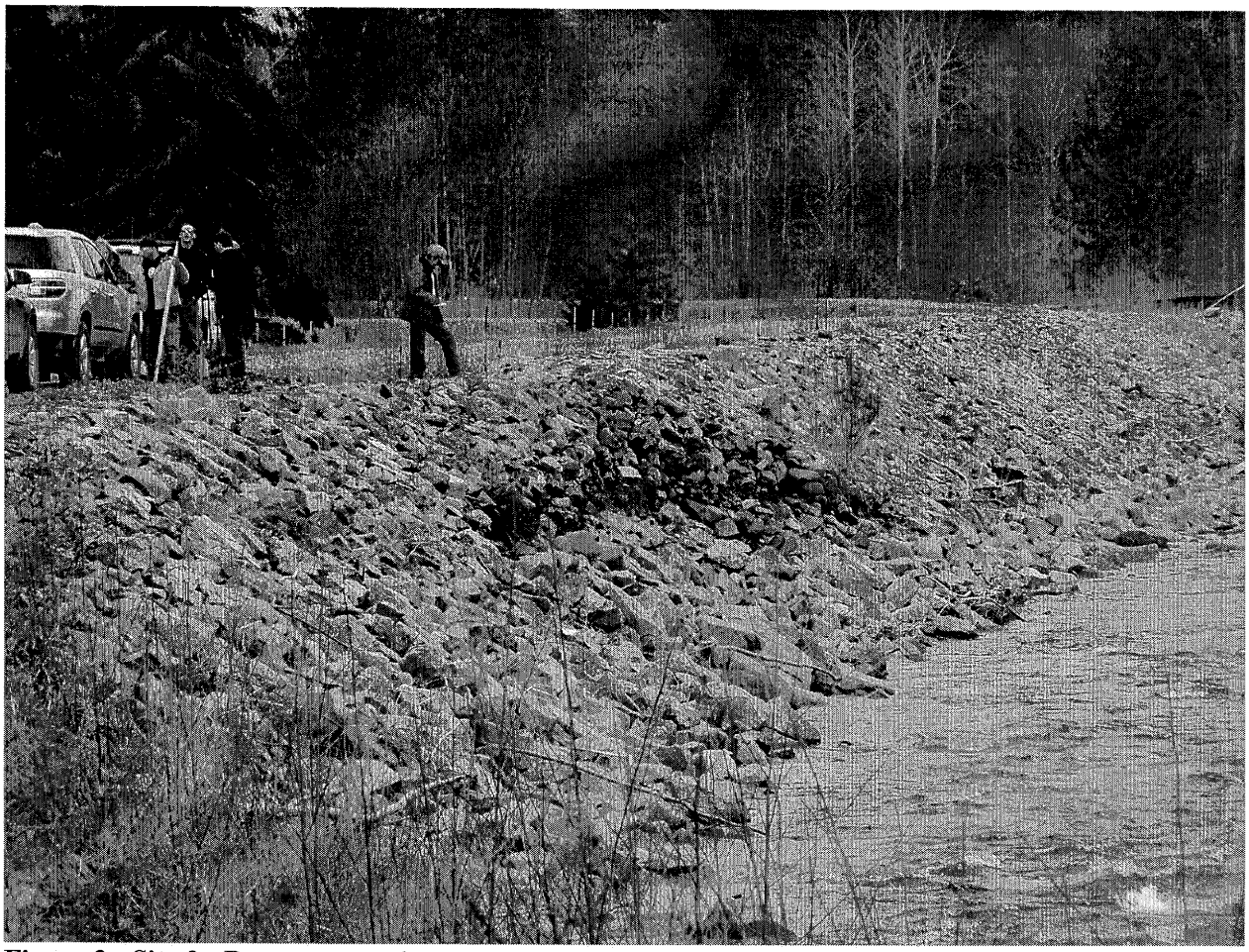


Figure 3 - Site 2 - Downstream site

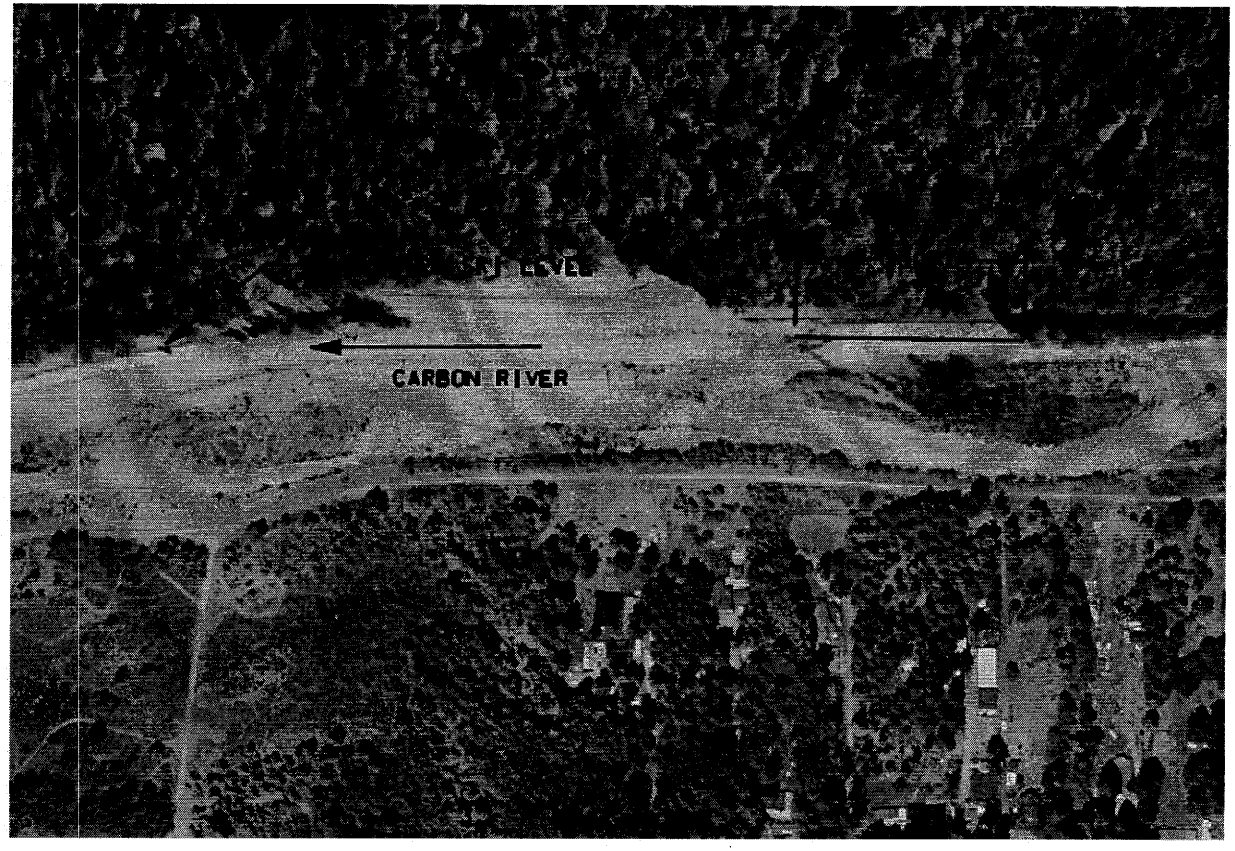
WATER SKI LEVEE

Appendix B: Project location and design data, maps, and related information

(Google Earth 2007: Annotated by Corps, 2009)

The Water Ski levee is located on the right bank of the Carbon River in Pierce County, WA

(Sections 26 and 27, Township 19 North, Range 5 East, Willamette Meridian)



NOTES

1. LEVEE TOE DAMAGE ALONG 390 LF.

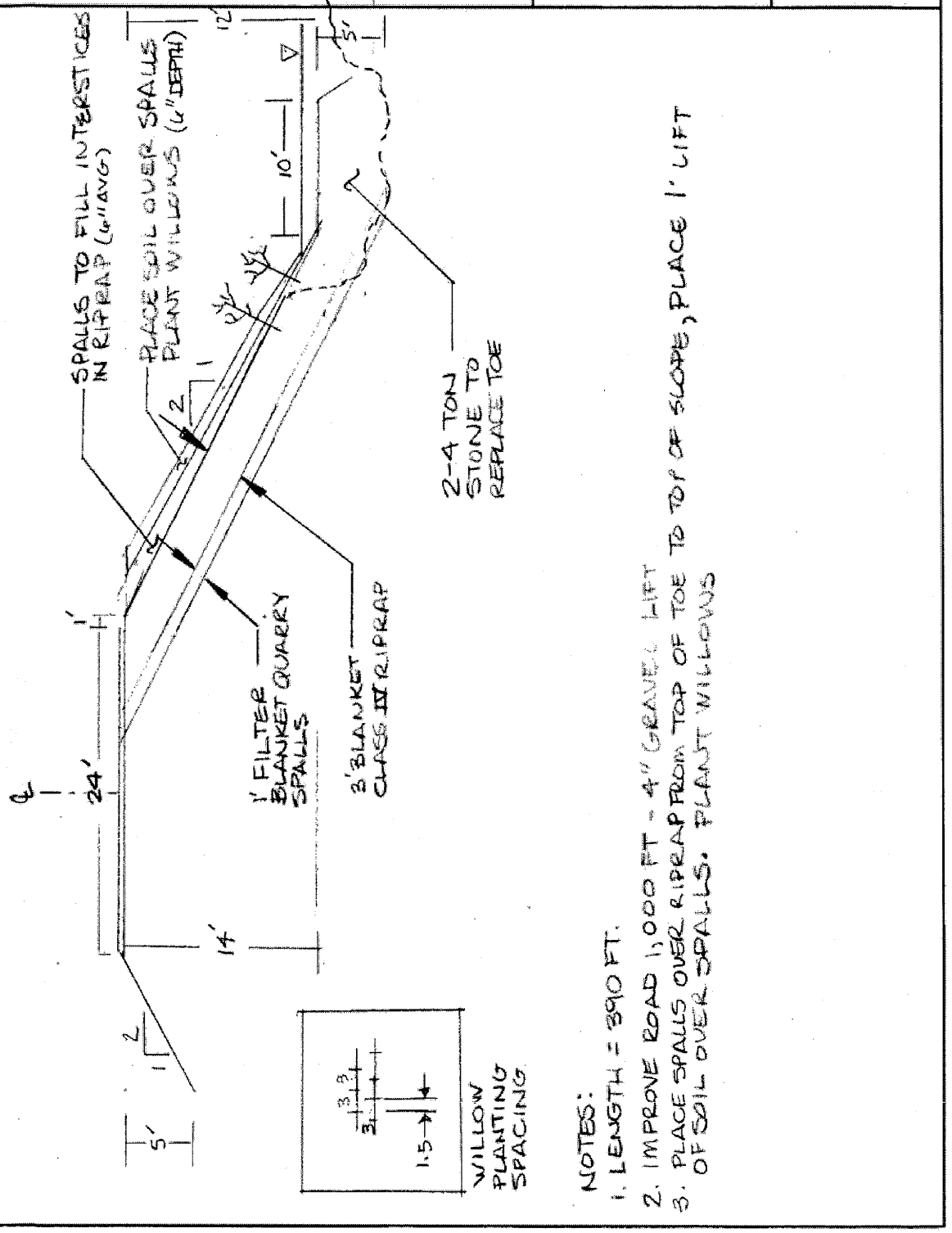
PLAN NORTH

WATER SKILYEE
PLAN VIEW

Plate number
C-101
Sheet 1 of 2

ENGINEERING DESIGN SHEET OFFICE SYMBOL: EC-DB-09

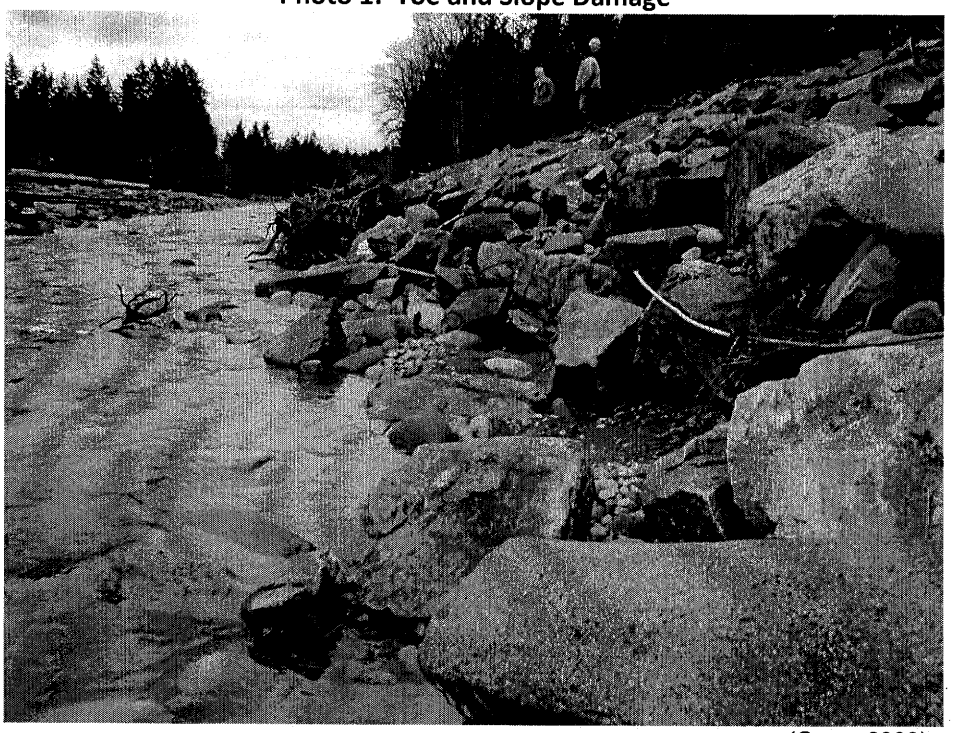
PROJECT	COMPUTED BY	DATE:
2009 PIERCE COUNTY LEVEE REPAIRS	DESJARDIN	13 APR 09
SUBJECT	**CHECKED BY**	SHEET: 2 OF: 2
WATER SKI LEVEE		PART:



NOTES:
1. LENGTH = 390 FT.
2. IMPROVE ROAD 1,000 FT - 4" GRAVEL LIFT
3. PLACE SPALLS OVER RIPRAP FROM TOP OF TOE TO TOP OF SLOPE, PLACE 1' LIFT OF SOIL OVER SPALLS. PLANT WILLOWS

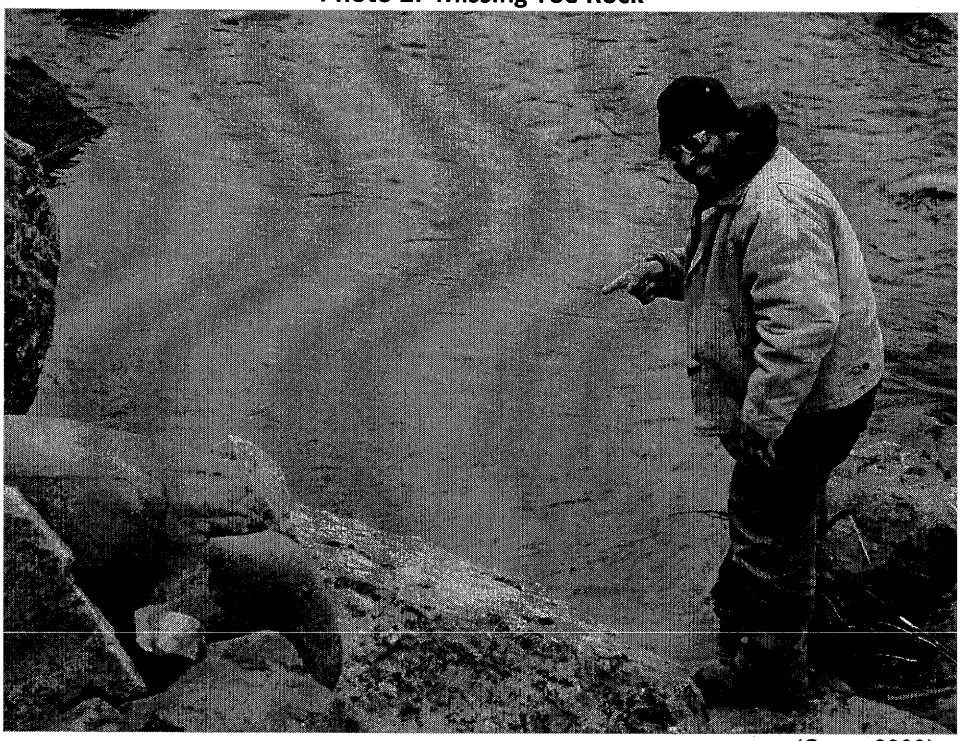
1.1.4 Appendix D: Damages

Photo 1: Toe and Slope Damage



(Corps 2009)

Photo 2: Missing Toe Rock



(Corps 2009)